# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/723,469 | 11/26/2003 | John P. Karidis | ARC920030084US1 | 7647 |

| | | |
|---|---|---|
| 7590 01/04/2007 | EXAMINER | |
| Frederick W. Gibb, III | GEBRESILASSIE, KIBROM K | |
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| Suite 304 | ART UNIT | PAPER NUMBER |
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| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 01/04/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/723,469 | KARIDIS ET AL. |
| | Examiner | Art Unit | |
| | Kibrom K. Gebresilassie | 2128 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>26 November 2006</u>.

2a)☐ This action is **FINAL**.          2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>26 November 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>11/26/2003</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

1.    This communication is responsive to application filed on November 26, 2003.

2.    Claims 1-22 are pending.

### *Drawings*

3.    The drawings were received on July 19, 2004. These drawings are replacing the drawings filed on November 26, 2003.

4.    Figures 1, and 2(A) through 2(P) should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 101*

5.    35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.    Claims 1-7 and 8-14 are rejected under 35 U.S.C. 101 because the claimed invention of Claim 1 and 8 do not appear to recite a tangible result. Data transformation is not the same as a physical transformation. In this case, they are simply a mathematical computation that are not stored or applied in a meaningful way that has a real world result.

MPEP 2106 states as follows:

"The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or

apparatus or must operate to change articles or materials to a different state or thing. However, the tangible

requirement does require that the claim must recite more than a 35 U.S.C. 101 judicial exception, in that the process

claim must set forth a practical application of that judicial exception to produce a real-world result. Benson, 409 U.S.

at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application."). "[A]n

application of a law of nature or mathematical formula to a ... process may well be deserving of patent protection."

Diehr, 450 U.S. at 187, 209 USPQ at 8 (emphasis added); see also Corning, 56 U.S. (15 How.) at 268, 14 L.Ed. 683

("It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a

patent is granted . . .."). In other words, the opposite meaning of "tangible" is "abstract."

7.      Claims 2-7 and 9-14 are rejected because they depend on rejected claims 1 and

8.

## Claim Rejections - 35 USC § 102

8.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

9.      Claims 1-7, and 15 –22 are rejected under 35 U.S.C. 102(b) as being anticipated

by C.C. Tappert. "Speed, Accuracy, Flexibility Trade-Offs in On-Line Character

Recognition". IBM Research Division. 10/28/87.

Claim 1

Tappert discloses a method of relaxing typing accuracy (Title), said method comprising:

comparing a geometric pattern formed by an inputted sequence of points to a pattern formed by lexical entry of sequences ( such as ....*a distance metric is used to compare an arbitrary point*.....;See: page 6 lines 4-6; and See Fig. 5);

calculating a distance between said geometric pattern and the pattern formed by letters corresponding to said lexical entry of sequences (See the equation distance in page 6; and See: Fig. 5); and

determining a word by selecting a shortest distance between said inputted sequence of points and letters corresponding to said lexical entry of sequences ( such as ....*choosing that character yielding the smallest overall distance.*; See: page 6 lines 22-24).

Claim 2

Tappert discloses the method of claim 1, wherein said distance is a mean distance of all inputted sequence of points (such as *Smoothing*; See: page 3 lines 29-32).

Claim 3

Tappert discloses the method of claim 1, wherein said distance is an elastic matching distance between said inputted sequence of points and said lexical entry of sequences (See: page 6 lines 4-6; Fig. 5).

Claim 4

Tappert discloses the method of claim 3, further comprising normalizing said elastic matching distance by an amount of letters in said word (See: page 5 lines 35-36).

Claim 5

Tappert discloses the method of claim 1, further comprising comparing said shortest total distance to a predetermined threshold distance (such as *elastic matching*; See: page 6 lines 4-6).

Claim 6

Tappert discloses the method of claim 5, further comprising outputting said word if said shortest total distance is smaller than said predetermined threshold distance (See: page 7 lines 2-5).

Claim 7

Tappert discloses the method of claim 5, further comprising outputting letters tapped if said shortest total distance is greater than said predetermined threshold distance (See: page 7 lines 2-5).

Claim 15

Tappert discloses a system of relaxing typing accuracy (Title) comprising:

a comparing module configured to compare an inputted sequence of points to a lexical entry of sequences ( such as ....*a distance metric is used to compare an arbitrary point*.....;See: page 6 lines 4-6; and See Fig. 5);

a calculator configured to calculate a distance between said inputted sequence of points and letters corresponding to said lexical entry of sequences (See the equation distance in page 6; and See: Fig. 5); and

a determining module configured to determine a word by selecting a shortest distance between said inputted sequence of points and letters corresponding to said lexical entry of sequences ( such as ....*choosing that character yielding the smallest overall distance.;* See: page 6 lines 22-24).

Claim 16

Tappert discloses the system of claim 15, wherein said distance is a mean distance of all inputted sequence of points (such as *Smoothing*; See: page 3 lines 29-32).

Claim 17

Tappert discloses the system of claim 15, wherein said distance is an elastic matching distance between said inputted sequence of points and said lexical entry of sequences (See: page 6 lines 4-6; Fig. 5).

Claim 18

Tappert discloses the system of claim 17, further comprising a statistical controller configured to normalize said elastic matching distance by an amount of letters in said word (See: page 5 lines 35-36).

Claim 19

Tappert discloses the system of claim 15, further comprising a comparator configured to compare said shortest total distance to a predetermined threshold

distance (such as *elastic matching*; See: page 6 lines 4-6).

Claim 20

Tappert discloses the system of claim 19, further comprising an output unit configured to output said word if said shortest total distance is smaller than said predetermined threshold distance (See: page 7 lines 2-5).

Claim 21

Tappert discloses the system of 19, further comprising an output unit configured to output letters tapped if said shortest total distance is greater than said predetermined threshold distance (See: page 7 lines 2-5).

Claim 22

Tappert discloses a system of relaxing typing accuracy (Title) comprising:

means for comparing a geometric pattern formed by an inputted sequence of points to a pattern formed by lexical entry of sequences ( such as ....*a distance metric is used to compare an arbitrary point*.....;See: page 6 lines 4-6; and See Fig. 5);

means for calculating a distance between said geometric pattern and the pattern formed by letters corresponding to said lexical entry of sequences (See the equation distance in page 6; and See: Fig. 5); and

means for determining a word by selecting a shortest distance between said inputted sequence of points and letters corresponding to said lexical entry of sequences ( such as ....*choosing that character yielding the smallest overall distance.*; See: page 6 lines 22-24).

## Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 2004/079557 A1 issued to O.J. Edwin, herein referred as Edwin, in view of C.C. Tappert. "Speed, Accuracy, Flexibility Trade-Offs in On-Line Character Recognition". IBM Research Division. 10/28/87.

Claim 8

Edwin discloses a method of relaxing typing accuracy, said method comprising:

recording a coordinate of at least one keystroke landing point, wherein said keystroke emanates from tapping a key on a keyboard (such as *detection region*; See: page 25, lines 10-12 and The table shown in page 25);

counting an amount of tapped landing points (analogous to ....*the most commonly scribed character to the least common scribed character..*; See: page 26 lines 5-7);

creating a set of words from a lexicon having a same number of said tapped landing points (such as matching routine...; See: page 24 lines 19-22, page 26, lines 5-11 and the table in page 27);

for each letter in each word in said set, computing a distance from said

coordinate to a central position of said key corresponding to said letter (such as *..line*

*equations are calculated...*; See: page 25 lines 1-2 and 6-9);

summing a total distance for each word (such as *..line equations are*

*calculated...*; See: page 25 lines 2-9); and

Edwin fails expressly to disclose selecting a word from said set having a shortest

total distance to said coordinate.

Tappert discloses selecting a word from said set having a shortest total distance

to said coordinate (such as *....choosing that character yielding the smallest overall*

*distance.;* See: page 6 lines 22-24).

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to combine the teachings of Tappert et al with Edwin et al because

both references are clearly concerned with character recognizing using a matching

routing in the touch screens or virtual keyboards. The motivation for doing so would

have been convenient to choose a character yielding the smallest overall distance, as

taught by Tappert et al, with the teachings of Edwin et al to make the matching routing

more efficient (See: Edwin et al, page 26 second paragraph).

Claim 9

Tappert discloses the method of claim 8, wherein said distance is a mean

distance of all said tapped landing points for each word (such as *Smoothing*; See: page

3 lines 29-32).

Claim 10

Tappert discloses the method of claim 8, wherein said distance is an elastic matching distance between said tapped landing points and said coordinate (See: page 6 lines 22-24).

Claim 11

Tappert discloses the method of claim 10, further comprising normalizing said elastic matching distance by an amount of letters in said word (See: page 5 lines 35-36).

Claim 12

Tappert discloses the method of claim 8, further comprising comparing said shortest total distance to a predetermined threshold distance (such as *elastic matching*; See: page 6 lines 4-6).

Claim 13

Tappert discloses the method of claim 12, further comprising outputting said word if said shortest total distance is smaller than said predetermined threshold distance (See: page 7 lines 2-5).

Claim 14

Tappert discloses the method of claim 12, further comprising outputting letters tapped if said shortest total distance is greater than said predetermined threshold distance (See: page 7 lines 2-5).

## *Conclusion*

12.    Claims 1-22 are rejected.

13.    The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

> *S. Zhai, and P. Kristensson. Shorthand Writing on Stylus Keyboard. ACM 2003.*
>
> *Vol. No. 5. Issue No. 1. Pgs. 97-104.*

14.    Any inquiring concerning this communication or earlier communication from the

examiner should be directed to Kibrom K. Gebresilassie whose telephone number is

(571) 272-8571. The examiner can normally be reached on Monday-Friday, 8:30 am to

5:00 pm.  If attempts to reach the examiner by telephone are unsuccessful, the

examiner supervisor, Kamini S. Shah can be reached at (571) 272-2279. The official fax

number is (571) 273-8300. Any inquiring of a general nature relating to the status of this

application should be directed to the group receptionist whose telephone number is

(571) 272-3700.


Kibrom K. Gebresilassie
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